

## **REMARKS**

### **Request for Reconsideration**

The Office action mailed on 11 September 2003 has been considered carefully. Reconsideration of the application is respectfully requested.

Claims 51-66 were cancelled in response to a restriction requirement.

Claims 48-50 and 67-83 are now pending.

### **Discussion of Informal Objections**

Regarding the objection to Claim 78, the grammatical error in Claim 78 has been corrected, thereby overcoming the informal objection raised by the Examiner.

Regarding the objections to Claims 68 and 69, contrary to the Examiner's assertion, Claims 68 and 69 impose further limitations on the claims from which they depend. Generally, Claim 68 recites a "filament" in combination with the "meltblowing apparatus" of Claim 67, which is a statutory combination under 35 U.S.C. § 101. More particularly, Claim 68 recites "... in combination [with the limitations of base Claim 67] a filament emanating from the first fluid orifice, the filament having a major vacillation amplitude between the two second fluid orifices on substantially opposite sides of the first fluid orifice." The "filament" (a noun) of Claim 68 imposes a further structural limitation on the "meltblowing apparatus" of base Claim 67. Claim 68 also recites that the filament includes a "... major vacillation amplitude ...", which is an adjective-noun combination that

modifies the "filament" limitation. The other limitations orient the filament relative to other limitations (i.e., the "orifices") of Claim 67. Claim 69 recites structural limitations that impose additional limitations on Claim 69, namely, that the filament of Claim 69 includes a "... minor vacillation amplitude between the portions of the body member devoid of fluid orifices." The informal objections to Claim 68 & 69 are thus improper and must be withdrawn.

### **Discussion of Obviousness-Type Double Patenting Objections**

Claims 73, 75-77, 79, 80 & 81-82 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over various claims of U.S. Patent No. 6,074,597.

Claims 73, 75-77, 79 & 81-82 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over various claims of U.S. Patent No. 5,902,540.

A terminal disclaimer under 37 CFR 1.321 is submitted herewith overcoming the obviousness-type double patenting rejections.

### **Allowability of Claims Over Boger et al.**

### **Rejection Summary**

Claims 67-71 & 83 stand rejected under 35 U.S.C. § 102(b) for anticipation by U.S. Patent No. 5,169,071 (Boger et al.). The Examiner asserts that Boger discloses, among other limitations, "... two second orifices disposed symmetrically on substantially opposite sides of the first fluid orifice...." Office Action, 11 September 2003, para. 11.

Discussion of Allowability of Claim 67

Regarding Independent Claim 67, Keller fails to disclose a

5                   ... meltblowing apparatus comprising:  
                  a first fluid orifice in a body member;  
                  two second fluid orifices in the body member, the two  
10               second fluid orifices disposed symmetrically on substantially  
                  opposite sides of the first fluid orifice,  
                  the first and second fluid orifices each have a  
                  corresponding fluid conduit disposed in the body member,  
                  two portions of the body member proximate the first  
                  fluid orifice devoid of fluid orifices, the two portions of the  
                  body member devoid of fluid orifices disposed symmetrically  
                  on substantially opposite sides of the first fluid orifice  
                  between the two second fluid orifices.

Contrary to the Examiner assertion, the air orifices (90) in Boger are arranged asymmetrically about the central fluid orifice (74). Boger in fact discloses a spiral nozzle with multiple air bores (90) arranged at angles to provide tangential flows relative to the central opening. Boger, col. 7, line 51-col. 8, line 18. The sectional

illustration in FIG. 4 of Boger (referenced by the Examiner) is an incomplete view of what is truly disclosed by Boger. Claim 67 is thus patentably distinguished over Boger.

Discussion of Allowability of Claim 83

Regarding independent Claim 83, Keller fails to disclose a

... meltblowing apparatus comprising:  
a first fluid orifice in a body member;  
a plurality of at least two second fluid orifices in the  
body member, the second fluid orifices disposed on  
substantially opposite sides of the first fluid orifice,  
the first and second fluid orifices each have a  
corresponding fluid conduit disposed in the body member,  
portions of the body member proximate the first fluid  
orifice devoid of fluid orifices, the portions of the body  
member devoid of fluid orifices disposed on substantially  
opposite sides of the first fluid orifice between the second  
fluid orifices.

Contrary to the Examiner assertion, the air orifices (90) in Boger are arranged asymmetrically about the central fluid orifice (74). Boger in fact discloses a spiral nozzle with multiple air bores (90) arranged at angles to provide tangential flows relative to the central opening. Boger, col. 7, line 51-col. 8, line 18. The sectional illustration in FIG. 4 of Boger (referenced by the Examiner) is an incomplete view of what is truly disclosed by Boger. Claim 83 is thus patentably distinguished over Boger

#### Discussion of Allowability of Claim 68

Regarding Claim 68, Boger fails to disclose in combination with the limitations of Claim 67, "... a filament emanating from the first fluid orifice, the filament having a major vacillation amplitude between the two second fluid orifices on substantially opposite sides of the first fluid orifice." The tangential gas flows of Boger produce spiral fibers. Boger, col. 10, lines 2-9. Boger does not produce the vacillation characteristic limitations of Claim 68. Thus, contrary to the Examiner's assertion, there is no illustration or discussion in Boger of the vacillation characteristic limitations of Claim 68. Claim 68 is thus further patentably distinguished over Boger.

#### Discussion of Allowability of Claim 69

Regarding Claim 69, Boger fails to disclose in combination with the limitations of Claim 68, "... the filament having a minor vacillation amplitude between the portions of the body member devoid of fluid orifices." The tangential gas flows (90) of Boger produce spiral fluid fibers. Boger, col. 10, lines 2-9. Boger does not produce the vacillation characteristic limitations of Claim 68. Thus, contrary to the Examiner's assertion, there is no illustration or discussion in Boger of the vacillation characteristic limitations of Claim 69. Claim 69 is thus further patentably distinguished over Boger.

### **Allowability of Claims Over Keller**

#### **Rejection Summary**

Claims 48-50, 67-72 & 83 stand rejected under 35 U.S.C. § 102(b) for anticipation by U.S. Patent No. 5,124,111 (Keller et al.). The Examiner asserts that Keller discloses, among other limitations, "... a plurality of at least two second fluid orifices ...." Office Action, 11 September 2003, para. 12.

#### **Discussion of Allowability of Claim 48**

Regarding independent Claim 48, Keller does not disclose a

... meltblowing system comprising:

a body member having a plurality of first fluid orifices,  
the body member having a plurality of second fluid orifices,  
each first fluid orifice flanked on substantially opposing sides  
by two separate second fluid orifices,

the plurality of first fluid orifices and the plurality of  
second fluid orifices formed by respective corresponding fluid  
conduits disposed non-convergently in the body member;

a plurality of filaments, each filament emanating from  
a corresponding one of the plurality of first fluid orifices, the  
plurality of filaments each having a predominant vacillation  
amplitude between the two second fluid orifices on  
substantially opposing sides of the corresponding first fluid  
orifice.

Keller discloses an annular gas supply passage (63) around the nozzle section (80) with the material orifice (82). Keller, col. 10, lines 9-16 and FIGs. 2 & 6. The sectional illustration of FIG. 4 (referenced by the Examiner) makes the annular gas passage (63) appear to be separate passages. Claim 48 is thus patentably distinguished over Keller.

#### Discussion of Allowability of Claim 50

Regarding Claim 50, dependent from Claim 48, Keller fails to disclose

...two portions of the body member proximate each first fluid orifice devoid of fluid orifices, the two portions of the body member devoid of fluid orifices disposed symmetrically on substantially opposite sides of the corresponding first fluid orifice between the two second fluid orifices on substantially opposite sides thereof.

In Keller, there can be no portion "... devoid of fluid orifices ..." between the at least two second orifices since Keller discloses an annular orifice. Claim 50 is thus further patentably distinguished over Keller.

#### Discussion of Allowability of Claim 67

Regarding Independent Claim 67, Keller fails to disclose a

... meltblowing apparatus comprising:  
a first fluid orifice in a body member;

two second fluid orifices in the body member, the two second fluid orifices disposed symmetrically on substantially opposite sides of the first fluid orifice,  
the first and second fluid orifices each have a corresponding fluid conduit disposed in the body member,  
two portions of the body member proximate the first fluid orifice devoid of fluid orifices, the two portions of the body member devoid of fluid orifices disposed symmetrically on substantially opposite sides of the first fluid orifice between the two second fluid orifices.

Keller discloses an annular orifice, not "... two second fluid orifices in the body member ...." Keller also fails to disclose portions of the "... body member proximate the first fluid orifice devoid of fluid orifices, the two portions of the body member devoid of fluid orifices disposed symmetrically on substantially opposite sides of the first fluid orifice between the two second fluid orifices." Claim 67 is therefore patentably distinguished over Keller.

#### Discussion of Allowability of Claim 68

Regarding Claim 68, Keller fails to disclose in combination with the limitations of Claim 67, "... a filament emanating from the first fluid orifice, the filament having a major vacillation amplitude between the two second fluid orifices on substantially opposite sides of the first fluid orifice." A filament vacillated by the annular gas flow of Keller does not produce the vacillation characteristic limitations of Claim 68. Nevertheless, contrary to the Examiner's assertion, there is no illustration or discussion in



Keller of the vacillation characteristic limitations of Claim 68. Claim 68 is thus further patentably distinguished over Keller.

Discussion of Allowability of Claim 69

Regarding Claim 69, Keller fails to disclose in combination with the limitations of Claim 68, "... the filament having a minor vacillation amplitude between the portions of the body member devoid of fluid orifices." Contrary to the Examiner's assertion, there is no illustration or discussion in Keller of the vacillation characteristic limitations of Claim 68. Claim 68 is thus further patentably distinguished over Keller.

Discussion of Allowability of Claim 72

Regarding Claim 72, Keller fails to disclose in combination with the limitations of Claim 67, "...

... a plurality of first fluid orifices in the body member  
and a plurality of second fluid orifices in the body member,  
the plurality first and second fluid orifices each have  
a corresponding fluid conduit disposed in the body member,  
each first fluid orifice having two second fluid orifices  
disposed symmetrically on substantially opposite sides  
thereof,

two portions of the body member proximate each first  
fluid orifice devoid of fluid orifices, the two portions of the  
body member devoid of fluid orifices disposed symmetrically  
on substantially opposite sides of the corresponding first fluid

orifice between the two second fluid orifices on substantially opposite sides thereof.

Keller discloses an annular gas supply passage (63) around the nozzle section (80) with the material orifice (82). Keller, col. 10, lines 9-16 and FIGs. 2 & 6. The sectional illustration of FIG. 4 (referenced by the Examiner) makes the annular gas passage (63) appear to be separate passages. The annular gas passage of Keller prevents the body portion of Keller from having portions devoid of fluid orifices. Claim 72 is thus further patentably distinguished over Keller.

#### Discussion of Allowability of Claim 83

Regarding independent Claim 83, Keller fails to disclose a

... meltblowing apparatus comprising:  
a first fluid orifice in a body member;  
a plurality of at least two second fluid orifices in the body member, the second fluid orifices disposed on substantially opposite sides of the first fluid orifice,  
the first and second fluid orifices each have a corresponding fluid conduit disposed in the body member,  
portions of the body member proximate the first fluid orifice devoid of fluid orifices, the portions of the body member devoid of fluid orifices disposed on substantially opposite sides of the first fluid orifice between the second fluid orifices.

Keller discloses an annular gas supply passage (63) around the nozzle section (80) with the material orifice (82). Keller, col. 10, lines 9-16 and FIGs. 2 & 6. The sectional illustration of FIG. 4 (referenced by the Examiner) makes the annular gas passage (63) appear to be separate passages. The annular gas passage of Keller prevents the body portion of Keller from having portions devoid of fluid orifices. Claim 83 is thus patentably distinguished over Keller.

### **Allowability of Claims Over Miller**

Claims 67-70, 73-74, 77-78 & 83 stand rejected under 35 U.S.C. § 102(b) for anticipation by "Beyond Meltblowing ..." (Miller).

Contrary to the Examiner's assertion, Miller, published in 1998, is not prior art under 35 U.S.C. 102(b). The instant application is a continuation of, and claims priority under 35 U.S.C. § 120 to, U.S. Application No. 09/255,906, filed on 20 February 1999, now U.S. Patent No. 6,074,597, which is a continuation of U.S. Application No. 08/717,080, filed on 18 October 1996, now U.S. Patent No. 5,902,540. The priority date of the instant application thus predates Miller.

The Official Filing Receipt fails to indicate that U.S. Application No. 09/255,906 claims priority from U.S. Application No. 08/717,080, filed on 18 October 1996. The Applicants' have requested that the Official record be updated and that the Filing Receipt be corrected. Kindly withdraw the rejection under 35 U.S.C. § 102(b) based on Miller.

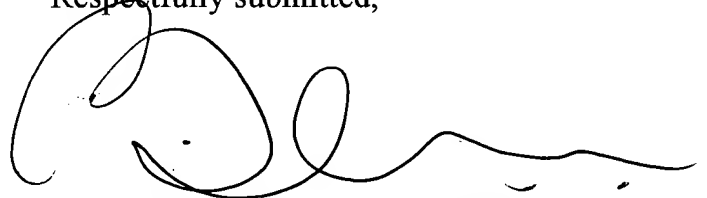
Kui-Chiu KWOK  
"Meltblowing Method And Apparatus"  
Atty. Docket No. 8010-61

Appl. No. 09/528,357  
Confirm. No. 4073  
Examiner J. DeI Sole, AU-1732

**Prayer for Relief**

In view of the discussion above, it is submitted that all pending claims of the present application are in condition for allowance. Kindly withdraw any rejections and objections thereto and allow the claims of the present application to issue as a United States Patent without delay.

Respectfully submitted,



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